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(FILE 'HOME' ENTERED AT 21:51:26 ON 13 JUN 2004)

FILE 'USPATFULL' ENTERED AT 21:58:08 ON 13 JUN 2004

L1 0 S 3792041/PN
L2 0 S 3951945/PN
L3 0 S US3792041/PN
L4 1 S US3951945/PN
L5 0 S US3792041/PN

FILE 'CAPLUS' ENTERED AT 22:00:47 ON 13 JUN 2004

L6 2479189 S PREPN/IA
L7 79171 S GLYCERIDE#/IA
L8 42051 S LIPASE/IA
L9 3038 S (UNSATURATED(2W) (FATTY(2W)ACIDS#))/IA
L10 123439 S GLYCEROL/IA
L11 154 S L6(4W)L7
L12 0 S L11 AND L8 AND L9 AND L10
L13 0 S L11 AND L8 AND L9
L14 24 S L11 AND L8
L15 296433 S (?FATTY(2W)ACID#)/IA
L16 16 S L11 AND L8 AND L15
L17 117878 S ESTERIFI?/IA
L18 9 S L17(4W)L9
L19 1 S L18 AND L8

FILE 'USPATFULL' ENTERED AT 22:10:49 ON 13 JUN 2004

L20 68223 S ESTERIFI?
L21 141914 S (?FATTY(2W)ACID#)
L22 118569 S GLYCEROL
L23 22616 S GLYCERIDE#
L24 12038 S LIPASE
L25 12612 S (UNSATURATED(2W) (FATTY(2W)ACIDS#))
L26 94 S L20(4W)L25
L27 6 S L26 AND L22 AND L24

FILE 'CAPLUS' ENTERED AT 22:14:45 ON 13 JUN 2004

E KASE M/AU,IN
L28 112 S E3, E31-32
E SUGIURA M/AU,IN
L29 143 S E3, E38-39
L30 2 S L28 AND L29

FILE 'USPATFULL' ENTERED AT 22:18:52 ON 13 JUN 2004

L31 2 S L30
L32 6 S L28
L33 6 S L29

L33 ANSWER 1 OF 6 USPATFULL on STN

ACCESSION NUMBER: 2004:50512 USPATFULL

TITLE: Acidic oil-in-water type emulsified compositions

INVENTOR(S): Kudou, Naoto, Tokyo, JAPAN

Nakajima, Yoshinobu, Tokyo, JAPAN

Satou, Makoto, Tokyo, JAPAN

Sugiura, Masakatsu, Kashima-gun, JAPAN

Yamaguchi, Hiroaki, Kashima-gun, JAPAN

Miyatani, Tsukasa, Tokyo, JAPAN

PATENT ASSIGNEE(S): Kao Corporation, Tokyo, JAPAN (non-U.S. corporation)

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| | NUMBER | KIND | DATE |
|---------------------|----------------|------|---------------|
| PATENT INFORMATION: | US 2004037940 | A1 | 20040226 |
| APPLICATION INFO.: | US 2003-608030 | A1 | 20030630 (10) |

| | NUMBER | DATE |
|-----------------------|-----------------------------------------------------------------------------------------------|----------|
| PRIORITY INFORMATION: | JP 2002-192538 | 20020701 |
| | JP 2002-322986 | 20021106 |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | APPLICATION | |
| LEGAL REPRESENTATIVE: | OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C., 1940 DUKE STREET, ALEXANDRIA, VA, 22314 | |
| NUMBER OF CLAIMS: | 7 | |
| EXEMPLARY CLAIM: | 1 | |
| LINE COUNT: | 721 | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Provided is an acidic oil-in-water type emulsified composition, containing an oil or fat having a diglyceride content of 30 wt. % or greater an egg yolk, and a water soluble soybean polysaccharide.

The acidic oil-in-water type emulsified composition of the present invention is excellent in taste and appearance stability, has resistance against pressure-induced shear stress which occurs upon preparation or use, shows less changes in physical properties, for example, viscosity reduction can be suppressed, and is free from appearance change such as oil/water separation. Thus, it has a stable quality.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L33 ANSWER 2 OF 6 USPATFULL on STN

ACCESSION NUMBER: 2002:43006 USPATFULL
TITLE: Solid-liquid fractionation process of oil composition
INVENTOR(S): **Sugiura, Masakatsu**, Kashima-gun, JAPAN
Kase, Minoru, Kashima-gun, JAPAN
Yamaguchi, Hiroaki, Kashima-gun, JAPAN
Yamada, Naoto, Kashima-gun, JAPAN
PATENT ASSIGNEE(S): Kao Corporation, Tokyo, JAPAN, 103-8210 (non-U.S. corporation)

| | NUMBER | KIND | DATE |
|---------------------|----------------|------|--------------|
| PATENT INFORMATION: | US 2002025370 | A1 | 20020228 |
| | US 6630189 | B2 | 20031007 |
| APPLICATION INFO.: | US 2001-900053 | A1 | 20010709 (9) |

| | NUMBER | DATE |
|-----------------------|---------------------------------------------------------------------------------------------------------------------|----------|
| PRIORITY INFORMATION: | JP 2000-212418 | 20000713 |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | APPLICATION | |
| LEGAL REPRESENTATIVE: | OBLON SPIVAK MCCLELLAND MAIER & NEUSTADT PC, FOURTH FLOOR, 1755 JEFFERSON DAVIS HIGHWAY, ARLINGTON, VA, 22202 | |
| NUMBER OF CLAIMS: | 7 | |
| EXEMPLARY CLAIM: | 1 | |
| LINE COUNT: | 372 | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A process for fractionating an oil composition containing at least 50% by weight of partial diglycerides into a solid portion and a liquid

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portion, which includes dissolving an emulsifier in the oil composition, cooling the solution to deposit crystals and then conducting solid-liquid separation. The process permits easily fractionating the oil composition into a solid oil composition and a liquid oil composition.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L33 ANSWER 3 OF 6 USPATFULL on STN

ACCESSION NUMBER: 2002:6075 USPATFULL
TITLE: Process for producing partial glyceride
INVENTOR(S): **Sugiura, Masakatsu**, Ibaraki, JAPAN
Shimizu, Masami, Ibaraki, JAPAN
Yamada, Yasushi, Ibaraki, JAPAN
Mine, Kouji, Ibaraki, JAPAN
Maruyama, Eizo, Ibaraki, JAPAN
Yamada, Naoto, Ibaraki, JAPAN
PATENT ASSIGNEE(S): Kao Corporation, Tokyo, JAPAN (non-U.S. corporation)

| | NUMBER | KIND | DATE |
|---------------------|----------------|------|-----------------------|
| PATENT INFORMATION: | US 6337414 | B1 | 20020108 |
| | WO 2000003031 | | 20000120 |
| APPLICATION INFO.: | US 2001-743218 | | 20010108 (9) |
| | WO 1999-JP3632 | | 19990706 |
| | | | 20010108 PCT 371 date |

| | NUMBER | DATE |
|-----------------------|---------------------------------------------------|----------|
| PRIORITY INFORMATION: | JP 1998-194237 | 19980709 |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | GRANTED | |
| PRIMARY EXAMINER: | Carr, Deborah D. | |
| LEGAL REPRESENTATIVE: | Oblon, Spivak, McClelland, Maier & Neustadt, P.C. | |
| NUMBER OF CLAIMS: | 3 | |
| EXEMPLARY CLAIM: | 1 | |
| NUMBER OF DRAWINGS: | 0 Drawing Figure(s); 0 Drawing Page(s) | |
| LINE COUNT: | 379 | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention relates to a process for preparing a partial glyceride, which includes, in a glycerolysis reaction of oil or fat making use of a lipase, conducting the reaction in the presence of water under conditions that crystals are partially precipitated in the reaction system in the course of the reaction and the concentration of free fatty acids in an oil phase amounts to at least 5% by weight.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L33 ANSWER 4 OF 6 USPATFULL on STN

ACCESSION NUMBER: 2001:112080 USPATFULL
TITLE: Process for producing diglycerides
INVENTOR(S): Yamada, Yasushi, Ibaraki, Japan
Shimizu, Masami, Ibaraki, Japan
Sugiura, Masakatsu, Ibaraki, Japan
Yamada, Naoto, Ibaraki, Japan
PATENT ASSIGNEE(S): Kao Corporation, Tokyo, Japan (non-U.S. corporation)

| | NUMBER | KIND | DATE |
|---------------------|---------------|------|--------------|
| PATENT INFORMATION: | US 6261812 | B1 | 20010717 |
| APPLICATION INFO.: | US 1998-70006 | | 19980430 (9) |

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| | NUMBER | DATE |
|-----------------------|---------------------------------------------------|----------|
| PRIORITY INFORMATION: | JP 1997-221502 | 19970818 |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | GRANTED | |
| PRIMARY EXAMINER: | Marx, Irene | |
| LEGAL REPRESENTATIVE: | Oblon, Spivak, McClelland, Maier & Neustadt, P.C. | |
| NUMBER OF CLAIMS: | 8 | |
| EXEMPLARY CLAIM: | 1 | |
| LINE COUNT: | 392 | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A process for producing diglycerides is provided by which high-purity diglycerides can be produced at a lower cost and more efficiently than conventional esterification and glycerolysis processes, and which inhibits the deterioration of oil quality, such as discoloration, and the loss of trace active ingredients derived from a feedstock of fats and oils, which involves partially hydrolyzing a fat or oil, followed by esterifying the resultant product with glycerol.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L33 ANSWER 5 OF 6 USPATFULL on STN

ACCESSION NUMBER: 2001:95291 USPATFULL
TITLE: Preparation process of diglyceride
INVENTOR(S): **Sugiura, Masakatsu**, Kashima-gun, Japan
Yamaguchi, Hiroaki, Kashima-gun, Japan
Yamada, Naoto, Kashima-gun, Japan

| | NUMBER | KIND | DATE |
|---------------------|----------------|------|--------------|
| PATENT INFORMATION: | US 2001004462 | A1 | 20010621 |
| | US 6361980 | B2 | 20020326 |
| APPLICATION INFO.: | US 2000-725571 | A1 | 20001130 (9) |

| | NUMBER | DATE |
|-----------------------|---------------------------------------------------------------------------------------------------------------|----------|
| PRIORITY INFORMATION: | JP 1999-359794 | 19991217 |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | APPLICATION | |
| LEGAL REPRESENTATIVE: | OBLON SPIVAK MCCLELLAND MAIER & NEUSTADT PC, FOURTH FLOOR, 1755 JEFFERSON DAVIS HIGHWAY, ARLINGTON, VA, 22202 | |
| NUMBER OF CLAIMS: | 15 | |
| EXEMPLARY CLAIM: | 1 | |
| NUMBER OF DRAWINGS: | 1 Drawing Page(s) | |
| LINE COUNT: | 596 | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides a process for preparing a diglyceride, which includes:

in an enzyme-packed tower which includes an immobilized lipase preparation, carrying out an esterification reaction between:

(1) an acyl group donor selected from the group including a fatty acid, a lower alcohol ester thereof, and a mixture thereof; and

(2) an acyl group acceptor selected from the group including glycerol, a monoglyceride, and a mixture thereof;

to obtain a reaction fluid from the enzyme-packed tower;

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reducing a water content or a lower alcohol content in the reaction fluid; and

subsequent to the reducing, recirculating the reaction fluid to the enzyme-packed tower, wherein a residence time of the reaction fluid in the enzyme-packed tower is 120 seconds or less;

to obtain a diglyceride. According to the present invention, a high-purity glyceride can be provided at a high yield in a short period of time.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L33 ANSWER 6 OF 6 USPATFULL on STN

ACCESSION NUMBER: 1999:110507 USPATFULL

TITLE: Method for reducing saturated fatty acids from fatty acid compositions

INVENTOR(S): **Sugiura, Masakatsu**, Ibaraki, Japan
Kase, Minoru, Ibaraki, Japan

PATENT ASSIGNEE(S): Kao Corporation, Tokyo, Japan (non-U.S. corporation)

| | NUMBER | KIND | DATE |
|---------------------|---------------|------|--------------|
| PATENT INFORMATION: | US 5952518 | | 19990914 |
| APPLICATION INFO.: | US 1998-69756 | | 19980430 (9) |

| | NUMBER | DATE |
|-----------------------|---------------------------------------------------|----------|
| PRIORITY INFORMATION: | JP 1997-213097 | 19970807 |
| DOCUMENT TYPE: | Utility | |
| FILE SEGMENT: | Granted | |
| PRIMARY EXAMINER: | Reamer, James H. | |
| LEGAL REPRESENTATIVE: | Oblon, Spivak, McClelland, Maier & Neustadt, P.C. | |
| NUMBER OF CLAIMS: | 20 | |
| EXEMPLARY CLAIM: | 1 | |
| LINE COUNT: | 388 | |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method for efficiently removing saturated fatty acids from a fatty acid mixture is provided by adding an emulsifying agent to a feedstock fatty acid mixture, mixing and then cooling the mixture, and removing the crystallized portion by dry fractionation, and the use of the obtained reduced saturated fatty acid level mixture to produce fatty acid esters resistant to crystallization at low temperatures.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.